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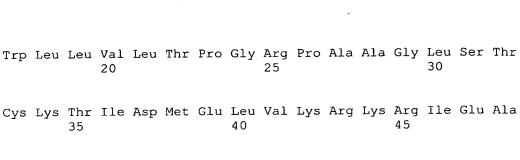
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tgg Trp	ctg Leu	cta Leu	gtg Val 20	ctg Leu	acg Thr	cct Pro	ggc Gly	cgg Arg 25	ccg Pro	gcc Ala	gcc Ala	gga Gly	ctg Leu 30	tcc Ser	acc Thr	96
tgc Cys	aag Lys	acc Thr 35	atc Ile	gac Asp	atg Met	gag Glu	ctg Leu 40	gtg Val	aag Lys	cgg Arg	aag Lys	cgc Arg 45	atc Ile	gag Glu	gcc Ala	144
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tac Tyr	aac Asn	agt Ser	acc Thr	cgc Arg 85	gac Asp	cgg Arg	gta Val	gcc Ala	ggg Gly 90	gaa Glu	agt Ser	gtc Val	gaa Glu	ccg Pro 95	gag Glu	288
ccc Pro	gag Glu	cca Pro	gag Glu 100	gcg Ala	gac Asp	tac Tyr	tac Tyr	gcc Ala 105	aag Lys	gag Glu	gtc Val	acc Thr	cgc Arg 110	gtg Val	cta Leu	336
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gat Asp	tcc Ser	tgg Trp	cgc Arg 180	Tyr	ctc Leu	agc Ser	aac Asn	cgg Arg 185	ctg Leu	ctg Leu	gcc Ala	ccc Pro	agt Ser 190	Asp	tca Ser	576
ccg Pro	gag Glu	tgg Trp 195	Leu	tcc Ser	ttt Phe	gat Asp	gtc Val 200	Thr	gga Gly	gtt Val	gtg Val	cgg Arg 205	Gln	tgg Trp	ctg Leu	624
acc Thr	cgc Arg 210	Arg	gag Glu	gct Ala	ata Ile	gag Glu 215	Gly	ttt Phe	cgc Arg	ctc Leu	agt Ser 220	Ala	cac	tct Ser	tcc Ser	672
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agc tcc cgg ca Ser Ser Arg Hi 275							864
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Gln Gly Asp Val Pro Pro Gly Pro Leu Pro Glu Ala Val Leu Ala Leu 65 70 75 80

Tyr Asn Ser Thr Arg Asp Arg Val Ala Gly Glu Ser Val Glu Pro Glu 85 90 95

Pro Glu Pro Glu Ala Asp Tyr Tyr Ala Lys Glu Val Thr Arg Val Leu 100 105 110

Met Val Glu Ser Gly Asn Gln Ile Tyr Asp Lys Phe Lys Gly Thr Pro $115 \,$ 120 $\,$ 125

His Ser Leu Tyr Met Leu Phe Asn Thr Ser Glu Leu Arg Glu Ala Val 130 135 140

Pro Glu Pro Val Leu Leu Ser Arg Ala Glu Leu Arg Leu Leu Arg Leu 145 150 155 160

Lys Leu Lys Val Glu Gln His Val Glu Leu Tyr Gln Lys Tyr Ser Asn 165 170 175

Asp Ser Trp Arg Tyr Leu Ser Asn Arg Leu Leu Ala Pro Ser Asp Ser 180 185 190

Pro Glu Trp Leu Ser Phe Asp Val Thr Gly Val Val Arg Gln Trp Leu 195 200 205

Thr Arg Arg Glu Ala Ile Glu Gly Phe Arg Leu Ser Ala His Ser Ser 210 215 220

Ser Asp Ser Lys Asp Asn Thr Leu His Val Glu Ile Asn Gly Phe Asn 225 230 235 240

Ser Gly Arg Arg Gly Asp Leu Ala Thr Ile His Gly Met Asn Arg Pro 245 250 255





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Ala Asn Phe Cys Leu Gly Pro Cys Pro Tyr Ile Trp Ser Leu Asp Thr 50 55 60

Gln Tyr Ser Lys Val Leu Ala Leu Tyr Asn Gln His Asn Pro Gly Ala 65 70 75 80

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a'cont.

672

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Cys Lys Thr Ile Asp Met Glu Leu Val Lys Arg Lys Arg Ile Glu Ala 35 40 45

Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Ala Ser Pro Pro Ser
50 55 60

Gln Gly Asp Val Pro Pro Gly Pro Leu Pro Glu Ala Val Leu Ala Leu 65 70 75 80

Tyr Asn Ser Thr Arg Asp Arg Val Ala Gly Glu Ser Val Glu Pro Glu 85 90 95

Pro Glu Pro Glu Ala Asp Tyr Tyr Ala Lys Glu Val Thr Arg Val Leu 100 105 110

Met Val Glu Ser Gly Asn Gln Ile Tyr Asp Lys Phe Lys Gly Thr Pro $115 \\ 120 \\ 125$

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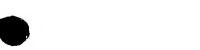
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Thr Arg Arg Glu Ala Ile Glu Gly Phe Arg Leu Ser Ala His Ser Ser 210 215 220

Ser Asp Ser Lys Asp Asn Thr Leu His Val Glu Ile Asn Gly Phe Asn 225 230 235 240



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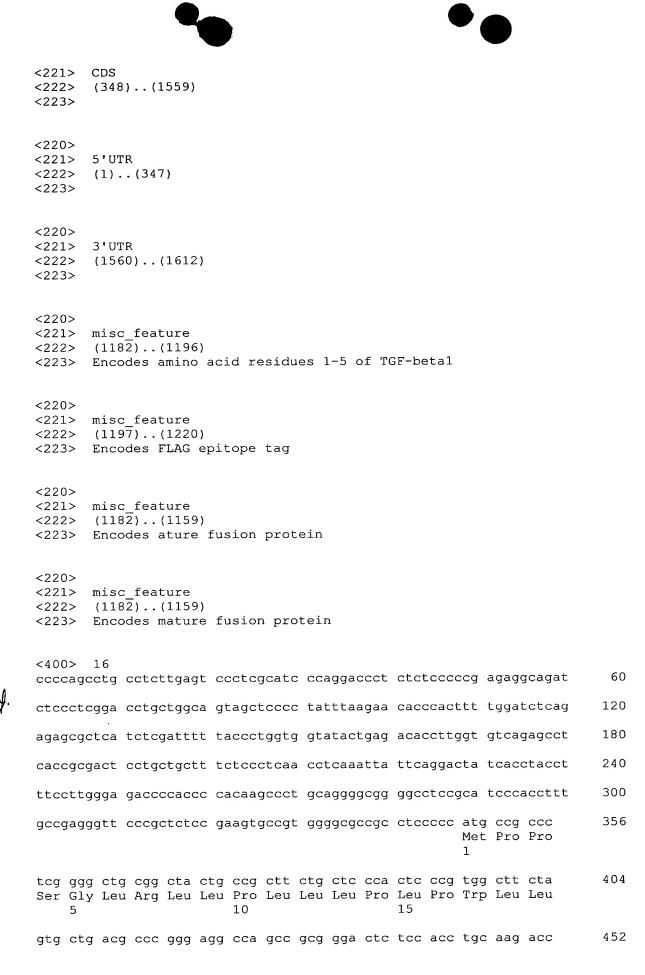
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	atc Ile															548
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	aac Asn															740
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atc cac ga Ile His G 325												
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Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Ala Ser Pro Pro Ser 50 55 60

Gln Gly Glu Val Pro Pro Gly Pro Leu Pro Glu Ala Val Leu Ala Leu 65 70 75 80

Tyr Asn Ser Thr Arg Asp Arg Val Ala Gly Glu Ser Ala Asp Pro Glu 85 90 95

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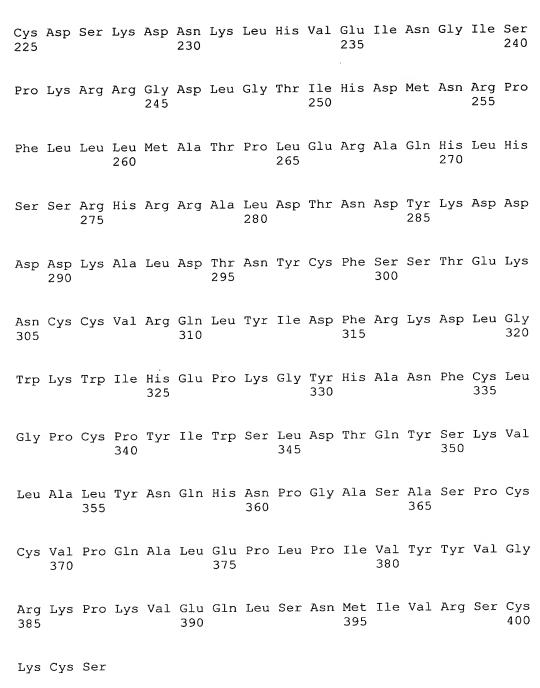
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cgt Arg 180	tac Tyr	ctt Leu	ggt Gly	aac Asn	cgg Arg 185	ctg Leu	ctg Leu	acc Thr	ccc Pro	act Thr 190	gat Asp	acg Thr	cct Pro	gag Glu	tgg Trp 195		932

ctg tct ttt gac gtc act gga gtt gta cgg cag tgg ctg aac caa gga Leu Ser Phe Asp Val Thr Gly Val Val Arg Gln Trp Leu Asn Gln Gly 200 z205 z210 z210 z200 z205 z205 z205 z205 z205 z205 z20	
Asp Gly Ile Gln Gly Phe Arg Phe Ser Ala His Cys Ser Cys Asp Ser	980
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ctc atg gcc acc ccc ctg gaa agg gcc cag cac ctg cac agc tca cgg Leu Met Ala Thr Pro Leu Glu Arg Ala Gln His Leu His Ser Ser Arg 260 265 270 275	1172
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TGF-beta1

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Cys Lys Thr Ile Asp Met Glu Leu Val Lys Arg Lys Arg Ile Glu Ala 35 40 45

Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Ala Ser Pro Pro Ser 50 55 60

Gln Gly Glu Val Pro Pro Gly Pro Leu Pro Glu Ala Val Leu Ala Leu 65 70 75 80

Tyr Asn Ser Thr Arg Asp Arg Val Ala Gly Glu Ser Ala Asp Pro Glu 85 90 95

Pro Glu Pro Glu Ala Asp Tyr Tyr Ala Lys Glu Val Thr Arg Val Leu 100 105 110

Met Val Asp Arg Asn Asn Ala Ile Tyr Glu Lys Thr Lys Asp Ile Ser 115 120 125

His Ser Ile Tyr Met Phe Phe Asn Thr Ser Asp Ile Arg Glu Ala Val 130 135 140

Pro Glu Pro Pro Leu Leu Ser Arg Ala Glu Leu Arg Leu Gln Arg Leu

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Asn Ser Trp Arg 180

Tyr Leu Gly Asn Arg Leu Leu Thr Pro Thr Asp Thr 190

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Cys Asp Ser Lys Asp Asn Lys Leu His Val Glu Ile Asn Gly Ile Ser 240

Pro Lys Arg Arg Gly Asp Leu Gly Thr Ile His Asp Met Asn Arg Pro

Phe Leu Leu Met Ala Thr Pro Leu Glu Arg Ala Gln His Leu His 260 265 270

Ser Ser Arg His Arg Arg Ala Leu Asp Thr Asn Ser Tyr Pro Tyr Asp 275 280 285

Val Pro Asp Tyr Ala Ser Leu Ala Leu Asp Thr Asn Tyr Cys Phe Ser 290 295 300

Ser Thr Glu Lys Asn Cys Cys Val Arg Gln Leu Tyr Ile Asp Phe Arg 305 310 315 320

Lys Asp Leu Gly Trp Lys Trp Ile His Glu Pro Lys Gly Tyr His Ala 325 . 330 335

Asn Phe Cys Leu Gly Pro Cys Pro Tyr Ile Trp Ser Leu Asp Thr Gln 340 345 350

Tyr Ser Lys Val Leu Ala Leu Tyr Asn Gln His Asn Pro Gly Ala Ser 355 360 365

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gag Glu	tac Tyr	tac Tyr	gcc Ala 100	aag Lys	gag Glu	gtt Val	tat Tyr	aaa Lys 105	atc Ile	gac Asp	atg Met	ccg Pro	tcc Ser 110	cac His	ctc Leu	336
ccc Pro	tcc Ser	gaa Glu 115	aat Asn	gcc Ala	atc Ile	ccg Pro	ccc Pro 120	act Thr	ttc Phe	tac Tyr	aga Arg	ccc Pro 125	tac Tyr	ttc Phe	aga Arg	384
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ctg Leu	acc Thr	att Ile	ctc Leu	tat Tyr 405	tac Tyr	att Ile	gga Gly	aat Asn	acg Thr 410	ccc Pro	aag Lys	atc Ile	gaa Glu	cag Gln 415	ctt Leu	1248
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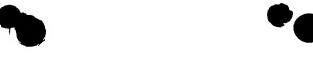
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Lys Leu Thr Ser Pro Pro Glu Asp Tyr Pro Glu Pro Asp Glu Val Pro 50 55 60)											
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Leu Thr Ser Pro Thr Gln Arg Tyr Ile Asp Ser Lys Val Val Lys Thr 180 185 190

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Ser Thr Tyr Ala Ser Gly Asp Gln Lys Thr Ile Lys Ser Thr Arg Lys 260 265 270

Lys Thr Ser Gly Lys Thr Pro His Leu Leu Met Leu Leu Pro Ser 275 280 285

Tyr Arg Leu Glu Ser Gln Gln Ser Ser Arg Arg Lys Lys Arg Ala Leu 290 295 300

Asp Ala Ala Asp Tyr Lys Asp Asp Asp Lys Ala Leu Asp Ala Ala 305 310 315 320

Tyr Cys Phe Arg Asn Val Gln Asp Asn Cys Cys Leu Arg Pro Leu Tyr 325 330 335

Ile Asp Phe Lys Arg Asp Leu Gly Trp Lys Trp Ile His Glu Pro Lys 340 345 350

Gly Tyr Asn Ala Asn Phe Cys Ala Gly Ala Cys Pro Tyr Leu Trp Ser 355 360 365

Ser Asp Thr Gln His Thr Lys Val Leu Ser Leu Tyr Asn Thr Ile Asn 370 380

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Pro Glu Val Ile Ser Ile Tyr Asn Ser Thr Arg Asp Leu Leu Gln Glu 65 70 75 80

Lys Ala Ser Arg Arg Ala Ala Ala Cys Glu Arg Glu Arg Ser Glu Gln 85 90 95

Glu Tyr Tyr Ala Lys Glu Val Tyr Lys Ile Asp Met Pro Ser His Leu 100 105 110

Pro Ser Glu Asn Ala Ile Pro Pro Thr Phe Tyr Arg Pro Tyr Phe Arg 115 120 125

Ile Val Arg Phe Asp Val Ser Thr Met Glu Lys Asn Ala Ser Asn Leu 130 140

Val Lys Ala Glu Phe Arg Val Phe Arg Leu Gln Asn Pro Lys Ala Arg 145 150 155 160

Val Ala Glu Gln Arg Ile Glu Leu Tyr Gln Ile Leu Lys Ser Lys Asp 165 170 175

Leu Thr Ser Pro Thr Gln Arg Tyr Ile Asp Ser Lys Val Val Lys Thr 180 185 190

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cgc aca gag cag aga att gag ctc ttc cag ata ctt cga ccg gat gag Arg Thr Glu Gln Arg Ile Glu Leu Phe Gln Ile Leu Arg Pro Asp Glu

(-	۵.

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ggc Gly	acc Thr	gct Ala 195	gaa Glu	tgg Trp	ctg Leu	tct Ser	ttc Phe 200	gat Asp	gtc Val	act Thr	gac Asp	act Thr 205	gtg Val	cgc Arg	gag Glu	624
tgg Trp	ctg Leu 210	ttg Leu	agg Arg	aga Arg	gag Glu	tcc Ser 215	aac Asn	ttg Leu	ggt Gly	ctg Leu	gaa Glu 220	atc Ile	agc Ser	atc Ile	cac His	672
tgt Cys 225	cca Pro	tgt Cys	cac His	acc Thr	ttt Phe 230	cag Gln	ccc Pro	aat Asn	gga Gly	gac Asp 235	ata Ile	ctg Leu	gaa Glu	aat Asn	gtt Val 240	720
	gag Glu															768
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	cca Pro															864
	ggc Gly 290															912
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Leu Arg Leu Thr Ser Pro Pro Glu Pro Ser Val Met Thr His Val Pro 50 55 60

Tyr Gln Val Leu Ala Leu Tyr Asn Ser Thr Arg Glu Leu Leu Glu Glu 65 70 . 75 80

Met His Gly Glu Arg Glu Glu Gly Cys Thr Gln Glu Thr Ser Glu Ser 85 90 95

Glu Tyr Tyr Ala Lys Glu Ile His Lys Phe Asp Met Ile Gln Gly Leu 100 105 110

Ala Glu His Asn Glu Leu Ala Val Cys Pro Lys Gly Ile Thr Ser Lys 115 120 125



Val Phe Arg Phe Asn Val Ser Ser Val Glu Lys Asn Gly Thr Asn Leu 130 135 140

Phe Arg Ala Glu Phe Arg Val Leu Arg Val Pro Asn Pro Ser Ser Lys 145 150 155 160

Arg Thr Glu Gln Arg Ile Glu Leu Phe Gln Ile Leu Arg Pro Asp Glu 165 170 175

His Ile Ala Lys Gln Arg Tyr Ile Gly Gly Lys Asn Leu Pro Thr Arg 180 185 190

Gly Thr Ala Glu Trp Leu Ser Phe Asp Val Thr Asp Thr Val Arg Glu 195 200 205

Trp Leu Leu Arg Arg Glu Ser Asn Leu Gly Leu Glu Ile Ser Ile His 210 215 220

Cys Pro Cys His Thr Phe Gln Pro Asn Gly Asp Ile Leu Glu Asn Val 225 230 235 240

His Glu Val Met Glu Ile Lys Phe Lys Gly Val Asp Asn Glu Asp Asp 245 250 255

His Gly Arg Gly Asp Leu Gly Arg Leu Lys Lys Gln Lys Asp His His 260 265 270

Asn Pro His Leu Ile Leu Met Met Ile Pro Pro His Arg Leu Asp Ser 275 280 285

Pro Gly Gln Gly Ser Gln Arg Lys Lys Arg Ala Leu Asp Thr Asn Asp 290 295 300

Tyr Lys Asp Asp Asp Asp Lys Ala Leu Asp Thr Asn Tyr Cys Phe Arg 305 310 315

Asn Leu Glu Glu Asn Cys Cys Val Arg Pro Leu Tyr Ile Asp Phe Arg 325 330 335

Gln Asp Leu Gly Trp Lys Trp Val His Glu Pro Lys Gly Tyr Tyr Ala 340 345 350

Asn Phe Cys Ser Gly Pro Cys Pro Tyr Leu Arg Ser Ala Asp Thr Thr 355 360 365

His Ser Thr Val Leu Gly Leu Tyr Asn Thr Leu Asn Pro Glu Ala Ser



380

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96

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Thr Ile Ser Leu Ser Leu Ser Thr Cys Thr Thr Leu Asp Phe Gly His
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atc aag aag agg gtg gaa gcc att agg gga cag atc ttg agc aag

144

Ile Lys Lys Lys Arg Val Glu Ala Ile Arg Gly Gln Ile Leu Ser Lys

35

40

45

ctc agg ctc acc agc ccc cct gag cca tcg gtg atg acc cac gtc ccc 192



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cat His	gag Glu	gtg Val	atg Met	gaa Glu 245	atc Ile	aaa Lys	ttc Phe	aaa Lys	gga Gly 250	gtg Val	gac Asp	aat Asn	gaa Glu	gat Asp 255	gac Asp	768
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cca Pro	ggc Gly	cag Gln	ggc Gly	agt Ser	cag Gln	agg Arg	aag Lys	aag Lys	agg Arg	gcc Ala	ctg Leu	gac Asp	acc Thr	aat Asn	agc Ser	912

290 295 300

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Leu Arg Leu Thr Ser Pro Pro Glu Pro Ser Val Met Thr His Val Pro 55

Tyr Gln Val Leu Ala Leu Tyr Asn Ser Thr Arg Glu Leu Leu Glu Glu

Met His Gly Glu Arg Glu Glu Gly Cys Thr Gln Glu Thr Ser Glu Ser 85

Glu Tyr Tyr Ala Lys Glu Ile His Lys Phe Asp Met Ile Gln Gly Leu

Ala Glu His Asn Glu Leu Ala Val Cys Pro Lys Gly Ile Thr Ser Lys 120 115

Val Phe Arg Phe Asn Val Ser Ser Val Glu Lys Asn Gly Thr Asn Leu 130 135

Phe Arg Ala Glu Phe Arg Val Leu Arg Val Pro Asn Pro Ser Ser Lys 145 155

Arg Thr Glu Gln Arg Ile Glu Leu Phe Gln Ile Leu Arg Pro Asp Glu 165

His Ile Ala Lys Gln Arg Tyr Ile Gly Gly Lys Asn Leu Pro Thr Arg 185 180

Gly Thr Ala Glu Trp Leu Ser Phe Asp Val Thr Asp Thr Val Arg Glu . 195

Trp Leu Leu Arg Arg Glu Ser Asn Leu Gly Leu Glu Ile Ser Ile His 215 210

Cys Pro Cys His Thr Phe Gln Pro Asn Gly Asp Ile Leu Glu Asn Val 235

His Glu Val Met Glu Ile Lys Phe Lys Gly Val Asp Asn Glu Asp Asp 250

His Gly Arg Gly Asp Leu Gly Arg Leu Lys Lys Gln Lys Asp His His 260 265 270

Asn Pro His Leu Ile Leu Met Met Ile Pro Pro His Arg Leu Asp Ser 275 280 285

Pro Gly Gln Gly Ser Gln Arg Lys Lys Arg Ala Leu Asp Thr Asn Ser 290 295 300

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ser Leu Ala Leu Asp Thr Asn 305 310 315 320

Tyr Cys Phe Arg Asn Leu Glu Glu Asn Cys Cys Val Arg Pro Leu Tyr 325 330 335

Ile Asp Phe Arg Gln Asp Leu Gly Trp Lys Trp Val His Glu Pro Lys 340 345 350

Gly Tyr Tyr Ala Asn Phe Cys Ser Gly Pro Cys Pro Tyr Leu Arg Ser 355 360 365

Ala Asp Thr Thr His Ser Thr Val Leu Gly Leu Tyr Asn Thr Leu Asn 370 375 380

Pro Glu Ala Ser Ala Ser Pro Cys Cys Val Pro Gln Asp Leu Glu Pro 385 390 395 400

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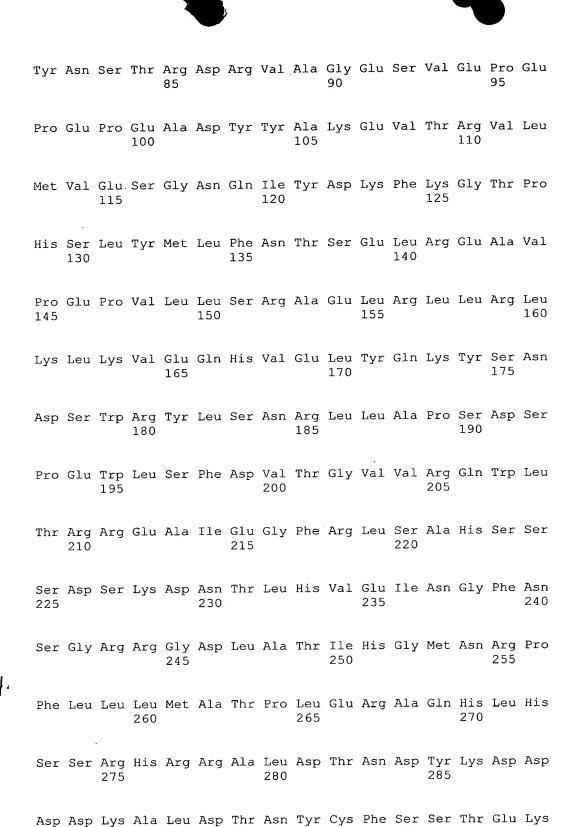
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a' Conti





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Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Ala Ser Pro Pr 50 55 60	o Ser
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tcc acg gag aag aac tgc tgc gtg cgg cag ctc t Ser Thr Glu Lys Asn Cys Cys Val Arg Gln Leu T 305 310	tac att gac ttc cgg Fyr Ile Asp Phe Arg 315	962
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Met Val Glu Ser Gly Asn Gln Ile Tyr Asp Lys Phe Lys Gly Thr Pro 115 120 125



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Trp Lys Trp Ile His Glu Pro Lys Gly Tyr His Ala Asn Phe Cys Leu

Gly Pro Cys Pro Tyr Ile Trp Ser Leu Asp Thr Gln Tyr Ser Lys Val

Leu Ala Leu Tyr Asn Gln His Asn Pro Gly Ala Ser Ala Ala Pro Cys



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Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Ala Ser Pro Pro Ser 50 55 60

Gln Gly Asp Val Pro Pro Gly Pro Leu Pro Glu Ala Val Leu Ala Leu 65 70 75 80

Tyr Asn Ser Thr Arg Asp Arg Val Ala Gly Glu Ser Val Glu Pro Glu 85 90 95

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Lys Leu Lys Val Glu Gln His Val Glu Leu Tyr Gln Lys Tyr Ser Asn 165 170 175

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Pro Glu Trp Leu Ser Phe Asp Val Thr Gly Val Val Arg Gln Trp Leu 195 200 205





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Phe Leu Leu Met Ala Thr Pro Leu Glu Arg Ala Gln His Leu His 260 265 270

Ser Ser Arg His Arg Arg Ala Leu Asp Thr Asn Ser Tyr Pro Tyr Asp 275 280 285

Val Pro Asp Tyr Ala Ser Leu Ala Leu Asp Thr Asn Tyr Cys Phe Ser 290 295 300

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Asn Phe Cys Leu Gly Pro Cys Pro Tyr Ile Trp Ser Leu Asp Thr Gln 340 345 350

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Chap.

Ser Ser Arg His Arg Arg Ala Leu Asp Thr Asn Ser Tyr Pro Tyr Asp

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Val Arg Ser Cys Lys Cys Ser